05-90
1108

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/976,674

DATE: 11/06/2001
TIME: 15:12:49

Input Set : A:\70669.txt
Output Set: N:\CRF3\11062001\I976674.raw

ENTERED

```
      3  <110>  APPLICANT: Qi, Steve
      4          Akinsanya, Karen
      5          Riviere, Pierre
      6          Junien, Jean-Louis
      8  <120>  TITLE OF INVENTION: NOVEL SERINE PROTEASE GENES RELATED TO DPPIV
     10  <130>  FILE REFERENCE: 70669
C-->  12  <140>  CURRENT APPLICATION NUMBER: US/09/976,674
C-->  12  <141>  CURRENT FILING DATE: 2001-10-12
     12  <150>  PRIOR APPLICATION NUMBER: US 60/240,117
     13  <151>  PRIOR FILING DATE: 2000-10-12
     15  <160>  NUMBER OF SEQ ID NOS: 61
     17  <170>  SOFTWARE: PatentIn version 3.1
     19  <210>  SEQ ID NO: 1
     20  <211>  LENGTH: 882
     21  <212>  TYPE: PRT
     22  <213>  ORGANISM: Homo sapiens
     24  <400>  SEQUENCE: 1
     26  Met Ala Ala Ala Met Glu Thr Glu Gln Leu Gly Val Glu Ile Phe Glu
     27  1               5                   10                  15
     30  Thr Ala Asp Cys Glu Glu Asn Ile Glu Ser Gln Asp Arg Pro Lys Leu
     31              20                  25                  30
     34  Glu Pro Phe Tyr Val Glu Arg Tyr Ser Trp Ser Gln Leu Lys Lys Leu
     35          35                  40                  45
     38  Leu Ala Asp Thr Arg Lys Tyr His Gly Tyr Met Met Ala Lys Ala Pro
     39      50                  55                  60
     42  His Asp Phe Met Phe Val Lys Arg Asn Asp Pro Asp Gly Pro His Ser
     43  65                  70                  75                  80
     46  Asp Arg Ile Tyr Tyr Leu Ala Met Ser Gly Glu Asn Arg Glu Asn Thr
     47              85                  90                  95
     50  Leu Phe Tyr Ser Glu Ile Pro Lys Thr Ile Asn Arg Ala Ala Val Leu
     51              100                 105                 110
     54  Met Leu Ser Trp Lys Pro Leu Leu Asp Leu Phe Gln Ala Thr Leu Asp
     55          115                 120                 125
     58  Tyr Gly Met Tyr Ser Arg Glu Glu Glu Leu Leu Arg Glu Arg Lys Arg
     59          130                 135                 140
     62  Ile Gly Thr Val Gly Ile Ala Ser Tyr Asp Tyr His Gln Gly Ser Gly
     63  145                 150                 155                 160
     66  Thr Phe Leu Phe Gln Ala Gly Ser Gly Ile Tyr His Val Lys Asp Gly
     67              165                 170                 175
     70  Gly Pro Gln Gly Phe Thr Gln Gln Pro Leu Arg Pro Asn Leu Val Glu
     71              180                 185                 190
     74  Thr Ser Cys Pro Asn Ile Arg Met Asp Pro Lys Leu Cys Pro Ala Asp
     75          195                 200                 205
     78  Pro Asp Trp Ile Ala Phe Ile His Ser Asn Asp Ile Trp Ile Ser Asn
     79      210                 215                 220
     82  Ile Val Thr Arg Glu Glu Arg Arg Leu Thr Tyr Val His Asn Glu Leu
     83  225                 230                 235                 240
```

RAW SEQUENCE LISTING   DATE: 11/06/2001
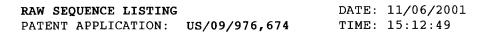PATENT APPLICATION: US/09/976,674   TIME: 15:12:49

Input Set : A:\70669.txt
Output Set: N:\CRF3\11062001\I976674.raw

```
86  Ala Asn Met Glu Glu Asp Ala Arg Ser Ala Gly Val Ala Thr Phe Val
87          245                 250                 255
90  Leu Gln Glu Glu Phe Asp Arg Tyr Ser Gly Tyr Trp Trp Cys Pro Lys
91          260                 265                 270
94  Ala Glu Thr Thr Pro Ser Gly Gly Lys Ile Leu Arg Ile Leu Tyr Glu
95          275                 280                 285
98  Glu Asn Asp Glu Ser Glu Val Glu Ile Ile His Val Thr Ser Pro Met
99      290                 295                 300
102 Leu Glu Thr Arg Arg Ala Asp Ser Phe Arg Tyr Pro Lys Thr Gly Thr
103 305                 310                 315                 320
106 Ala Asn Pro Lys Val Thr Phe Lys Met Ser Glu Ile Met Ile Asp Ala
107         325                 330                 335
110 Glu Gly Arg Ile Ile Asp Val Ile Asp Lys Glu Leu Ile Gln Pro Phe
111         340                 345                 350
114 Glu Ile Leu Phe Glu Gly Val Glu Tyr Ile Ala Arg Ala Gly Trp Thr
115         355                 360                 365
118 Pro Glu Gly Lys Tyr Ala Trp Ser Ile Leu Leu Asp Arg Ser Gln Thr
119     370                 375                 380
122 Arg Leu Gln Ile Val Leu Ile Ser Pro Glu Leu Phe Ile Pro Val Glu
123 385                 390                 395                 400
126 Asp Asp Val Met Glu Arg Gln Arg Leu Ile Glu Ser Val Pro Asp Ser
127         405                 410                 415
130 Val Thr Pro Leu Ile Ile Tyr Glu Glu Thr Thr Asp Ile Trp Ile Asn
131         420                 425                 430
134 Ile His Asp Ile Phe His Val Phe Pro Gln Ser His Glu Glu Glu Ile
135         435                 440                 445
138 Glu Phe Ile Phe Ala Ser Glu Cys Lys Thr Gly Phe Arg His Leu Tyr
139     450                 455                 460
142 Lys Ile Thr Ser Ile Leu Lys Glu Ser Lys Tyr Lys Arg Ser Ser Gly
143 465                 470                 475                 480
146 Gly Leu Pro Ala Pro Ser Asp Phe Lys Cys Pro Ile Lys Glu Glu Ile
147         485                 490                 495
150 Ala Ile Thr Ser Gly Glu Trp Glu Val Leu Gly Arg His Gly Ser Asn
151         500                 505                 510
154 Ile Gln Val Asp Glu Val Arg Arg Leu Val Tyr Phe Glu Gly Thr Lys
155         515                 520                 525
158 Asp Ser Pro Leu Glu His His Leu Tyr Val Val Ser Tyr Val Asn Pro
159     530                 535                 540
162 Gly Glu Val Thr Arg Leu Thr Asp Arg Gly Tyr Ser His Ser Cys Cys
163 545                 550                 555                 560
166 Ile Ser Gln His Cys Asp Phe Phe Ile Ser Lys Tyr Ser Asn Gln Lys
167         565                 570                 575
170 Asn Pro His Cys Val Ser Leu Tyr Lys Leu Ser Ser Pro Glu Asp Asp
171         580                 585                 590
174 Pro Thr Cys Lys Thr Lys Glu Phe Trp Ala Thr Ile Leu Asp Ser Ala
175         595                 600                 605
178 Gly Pro Leu Pro Asp Tyr Thr Pro Pro Glu Ile Phe Ser Phe Glu Ser
179     610                 615                 620
182 Thr Thr Gly Phe Thr Leu Tyr Gly Met Leu Tyr Lys Pro His Asp Leu
```

RAW SEQUENCE LISTING   DATE: 11/06/2001
PATENT APPLICATION: US/09/976,674   TIME: 15:12:49

Input Set : A:\70669.txt
Output Set: N:\CRF3\11062001\I976674.raw

```
183 625                 630                 635                 640
186 Gln Pro Gly Lys Lys Tyr Pro Thr Val Leu Phe Ile Tyr Gly Gly Pro
187             645                 650                 655
190 Gln Val Gln Leu Val Asn Asn Arg Phe Lys Gly Val Lys Tyr Phe Arg
191             660                 665                 670
194 Leu Asn Thr Leu Ala Ser Leu Gly Tyr Val Val Val Val Ile Asp Asn
195         675                 680                 685
198 Arg Gly Ser Cys His Arg Gly Leu Lys Phe Glu Gly Ala Phe Lys Tyr
199     690                 695                 700
202 Lys Met Gly Gln Ile Glu Ile Asp Asp Gln Val Glu Gly Leu Gln Tyr
203 705                 710                 715                 720
206 Leu Ala Ser Arg Tyr Asp Phe Ile Asp Leu Asp Arg Val Gly Ile His
207             725                 730                 735
210 Gly Trp Ser Tyr Gly Gly Tyr Leu Ser Leu Met Ala Leu Met Gln Arg
211             740                 745                 750
214 Ser Asp Ile Phe Arg Val Ala Ile Ala Gly Ala Pro Val Thr Leu Trp
215         755                 760                 765
218 Ile Phe Tyr Asp Thr Gly Tyr Thr Glu Arg Tyr Met Gly His Pro Asp
219     770                 775                 780
222 Gln Asn Glu Gln Gly Tyr Tyr Leu Gly Ser Val Ala Met Gln Ala Glu
223 785                 790                 795                 800
226 Lys Phe Pro Ser Glu Pro Asn Arg Leu Leu Leu Leu His Gly Phe Leu
227             805                 810                 815
230 Asp Glu Asn Val His Phe Ala His Thr Ser Ile Leu Leu Ser Phe Leu
231             820                 825                 830
234 Val Arg Ala Gly Lys Pro Tyr Asp Leu Gln Ile Tyr Pro Gln Glu Arg
235         835                 840                 845
238 His Ser Ile Arg Val Pro Glu Ser Gly Glu His Tyr Glu Leu His Leu
239     850                 855                 860
242 Leu His Tyr Leu Gln Glu Asn Leu Gly Ser Arg Ile Ala Ala Leu Lys
243 865                 870                 875                 880
246 Val Ile
250 <210> SEQ ID NO: 2
251 <211> LENGTH: 2671
252 <212> TYPE: DNA
253 <213> ORGANISM: Homo sapiens
255 <400> SEQUENCE: 2
256 cggtaccatg gcagcagcaa tggaaacaga acagctgggt gttgagatat ttgaaactgc    60
258 ggactgtgag gagaatattg aatcacagga tcggcctaaa ttggagcctt tttatgttga   120
260 gcggtattcc tggagtcagc ttaaaaagct gcttgccgat accagaaaat atcatggcta   180
262 catgatggct aaggcaccac atgatttcat gtttgtgaag aggaatgatc cagatggacc   240
264 tcattcagac agaatctatt accttgccat gtctggtgag aacagagaaa atacactgtt   300
266 ttattctgaa attcccaaaa ctatcaatag agcagcagtc ttaatgctct cttggaagcc   360
268 tcttttggat ctttttcagg caacactgga ctatggaatg tattctcgag aagaagaact   420
270 attaagagaa agaaaacgca ttggaacagt cggaattgct tcttacgatt atcaccaagg   480
272 aagtggaaca tttctgtttc aagccggtag tggaatttat cacgtaaaag atggagggcc   540
274 acaaggattt acgcaacaac ctttaaggcc caatctagtg gaaactagtt gtcccaacat   600
276 acggatggat ccaaaattat gccctgctga tccagactgg attgctttta tacatagcaa   660
278 cgatatttgg atatctaaca tcgtaaccag agaagaaagg agactcactt atgtgcacaa   720
```
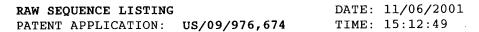
RAW SEQUENCE LISTING   DATE: 11/06/2001
PATENT APPLICATION: US/09/976,674   TIME: 15:12:49

Input Set : A:\70669.txt
Output Set: N:\CRF3\11062001\I976674.raw

```
280 tgagctagcc aacatggaag aagatgccag atcagctgga gtcgctacct ttgttctcca   780
282 agaagaattt gatagatatt ctggctattg gtggtgtcca aaagctgaaa caactcccag   840
284 tggtggtaaa attcttagaa ttctatatga agaaaatgat gaatctgagg tggaaattat   900
286 tcatgttaca tcccctatgt tggaaacaag gagggcagat tcattccgtt atcctaaaac   960
288 aggtacagca aatcctaaag tcacttttaa gatgtcagaa ataatgattg atgctgaagg  1020
290 aaggatcata gatgtcatag ataaggaact aattcaacct tttgagattc tatttgaagg  1080
292 agttgaatat attgccagag ctggatggac tcctgaggga aaatatgctt ggtccatcct  1140
294 actagatcgc tcccagactc gcctgcagat agtgttgatc tcacctgaat tatttatccc  1200
296 agtagaagat gatgttatgg aaaggcagag actcattgag tcagtgcctg attctgtgac  1260
298 gccactaatt atctatgaag aaacaacaga catctggata aatatccatg acatctttca  1320
300 tgttttttccc caaagtcacg aagaggaaat tgagtttatt tttgcctctg aatgcaaaac  1380
302 aggtttccgt catttataca aaattacatc tattttaaag gaaagcaaat ataaacgatc  1440
304 cagtggtggg ctgcctgctc caagtgattt caagtgtcct atcaaagagg agatagcaat  1500
306 taccagtggt gaatgggaag ttcttggccg gcatggatct aatatccaag ttgatgaagt  1560
308 cagaaggctg gtatattttg aaggcaccaa agactcccct ttagagcatc acctgtacgt  1620
310 agtcagttac gtaaatcctg gagaggtgac aaggctgact gaccgtggct actcacattc  1680
312 ttgctgcatc agtcagcact gtgacttctt tataagtaag tatagtaacc agaagaatcc  1740
314 acactgtgtg tccctttaca agctatcaag tcctgaagat gacccaactt gcaaaacaaa  1800
316 ggaattttgg gccaccattt tggattcagc aggtcctctt cctgactata ctcctccaga  1860
318 aattttctct tttgaaagta ctactggatt tacattgtat gggatgctct acaagcctca  1920
320 tgatctacag cctggaaaga aatatcctac tgtgctgttc atatatggtg gtcctcaggt  1980
322 gcagttggtg aataatcgat ttaaaggagt caagtatttc cgcttgaata ccctagcctc  2040
324 tctaggttat gtggttgtag tgatagacaa caggggatcc tgtcaccgag ggcttaaatt  2100
326 tgaaggcgcc tttaaatata aaatgggtca aatagaaatt gacgatcagg tggaaggact  2160
328 ccaatatcta gcttctcgat atgatttcat tgacttagat cgtgtgggca tccacggctg  2220
330 gtcctatgga ggatacctct ccctgatggc attaatgcag aggtcagata tcttcagggt  2280
332 tgctattgct ggggccccag tcactctgtg gatcttctat gatacaggat acacggaacg  2340
334 ttatatgggt caccctgacc agaatgaaca gggctattac ttaggatctg tggccatgca  2400
336 agcagaaaag ttcccctctg aaccaaatcg tttactgctc ttacatggtt cctggatga   2460
338 gaatgtccat tttgcacata ccagtatatt actgagtttt ttagtgaggg ctggaaagcc  2520
340 atatgattta cagatctatc ctcaggagag acacagcata agagttcctg aatcgggaga  2580
342 acattatgaa ctgcatcttt tgcactacct tcaagaaaac cttggatcac gtattgctgc  2640
344 tctaaaagtg atatgagcgg ccgcgagctc c                                  2671
347 <210> SEQ ID NO: 3
348 <211> LENGTH: 863
349 <212> TYPE: PRT
350 <213> ORGANISM: Homo sapiens
352 <400> SEQUENCE: 3
354 Met Ala Thr Thr Gly Thr Pro Thr Ala Asp Arg Gly Asp Ala Ala Ala
355 1               5                   10                  15
358 Thr Asp Asp Pro Ala Ala Arg Phe Gln Val Gln Lys His Ser Trp Asp
359             20                  25                  30
362 Gly Leu Arg Ser Ile Ile His Gly Ser Arg Lys Tyr Ser Gly Leu Ile
363         35                  40                  45
366 Val Asn Lys Ala Pro His Asp Phe Gln Phe Val Gln Lys Thr Asp Glu
367     50                  55                  60
370 Ser Gly Pro His Ser His Arg Leu Tyr Tyr Leu Gly Met Pro Tyr Gly
371 65                  70                  75                  80
374 Ser Arg Glu Asn Ser Leu Leu Tyr Ser Glu Ile Pro Lys Lys Val Arg
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/976,674

DATE: 11/06/2001
TIME: 15:12:49

Input Set : A:\70669.txt
Output Set: N:\CRF3\11062001\I976674.raw

```
·375                85                90                95
378 Lys Glu Ala Leu Leu Leu Leu Ser Trp Lys Gln Met Leu Asp His Phe
379             100             105             110
382 Gln Ala Thr Pro His His Gly Val Tyr Ser Arg Glu Glu Glu Leu Leu
383         115             120             125
386 Arg Glu Arg Lys Arg Leu Gly Val Phe Gly Ile Thr Ser Tyr Asp Phe
387     130             135             140
390 His Ser Glu Ser Gly Leu Phe Leu Phe Gln Ala Ser Asn Ser Leu Phe
391 145             150             155             160
394 His Cys Arg Asp Gly Gly Lys Asn Gly Phe Met Val Ser Pro Met Lys
395             165             170             175
398 Pro Leu Glu Ile Lys Thr Gln Cys Ser Gly Pro Arg Met Asp Pro Lys
399         180             185             190
402 Ile Cys Pro Ala Asp Pro Ala Phe Phe Ser Phe Ile Asn Asn Ser Asp
403         195             200             205
406 Leu Trp Val Ala Asn Ile Glu Thr Gly Glu Glu Arg Arg Leu Thr Phe
407     210             215             220
410 Cys His Gln Gly Leu Ser Asn Val Leu Asp Asp Pro Lys Ser Ala Gly
411 225             230             235             240
414 Val Ala Thr Phe Val Ile Gln Glu Glu Phe Asp Arg Phe Thr Gly Tyr·
415             245             250             255
418 Trp Trp Cys Pro Thr Ala Ser Trp Glu Gly Ser Glu Gly Leu Lys Thr
419         260             265             270
422 Leu Arg Ile Leu Tyr Glu Glu Val Asp Glu Ser Glu Val Glu Val Ile
423         275             280             285
426 His Val Pro Ser Pro Ala Leu Glu Glu Arg Lys Thr Asp Ser Tyr Arg
427     290             295             300
430 Tyr Pro Arg Thr Gly Ser Lys Asn Pro Lys Ile Ala Leu Lys Leu Ala
431 305             310             315             320
434 Glu Phe Gln Thr Asp Ser Gln Gly Lys Ile Val Ser Thr Gln Glu Lys
435 .           325             330             335
438 Glu Leu Val Gln Pro Phe Ser Ser Leu Phe Pro Lys Val Glu Tyr Ile
439         340             345             350
442 Ala Arg Ala Gly Trp Thr Arg Asp Gly Lys Tyr Ala Trp Ala Met Phe
443         355             360             365
446 Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu Leu Pro Pro Ala
447     370             375             380
450 Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg Leu Ala Ser Ala
451 385             390             395             400
454 Arg Ala Val Pro Arg Asn Val Gln Pro Tyr Val Val Tyr Glu Glu Val
455             405             410             415
458 Thr Asn Val Trp Ile Asn Val His Asp Ile Phe Tyr Pro Phe Pro Gln
459             420             425             430
462 Ser Glu Gly Glu Asp Glu Leu Cys Phe Leu Arg Ala Asn Glu Cys Lys
463         435             440             445
466 Thr Gly Phe Cys His Leu Tyr Lys Val Thr Ala Val Leu Lys Ser Gln
467     450             455             460
470 Gly Tyr Asp Trp Ser Glu Pro Phe Ser Pro Gly Glu Asp Glu Phe Lys
471 465             470             475             480
```

VERIFICATION SUMMARY   DATE: 11/06/2001
PATENT APPLICATION: **US/09/976,674**   TIME: 15:12:50

Input Set : **A:\70669.txt**
Output Set: **N:\CRF3\11062001\I976674.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date